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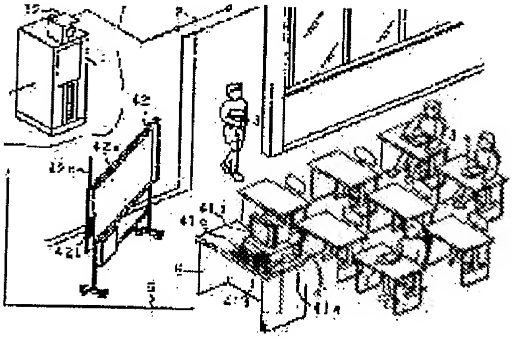
(71)Applicant : MATSUSHITA ELECTRIC IND CO LTD
(72)Inventor : FUJIMOTO MAKOTO
KAYASHIMA KAZUHIRO
SEO MASAHIRO

(54) INFORMATION PROCESSOR

(57)Abstract:

PROBLEM TO BE SOLVED: To provide an information processor for allowing a student to easily manage his or her individual information (health information and result information or the like) in an education job site.

SOLUTION: Each student owns a terminal equipment 3 for receiving a radio wave indicating information from a host computer 1 set in a school, and for transmitting and receiving information by radio with a computer 41 for a teacher. Therefore, the individual information of the student himself or herself can be managed by using this terminal equipment 3. The radio wave indicating health information (height and weight or the like) or result information (test result or the like) transmitted from a measuring equipment or the computer 41 for a teacher is automatically received by the terminal equipment 3, and the individual information is read from the received result, and stored. The secular change of the stored individual information is graph-displayed on the display part of the terminal equipment 3.



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CLAIMS

[Claim(s)]
[Claim 1]An information processor characterized by comprising the following for inputting and displaying information which each student of a school uses.
An input means which inputs each student's personal information.
A storing means which stores inputted personal information.
A displaying means which displays personal information inputted or stored.

[Claim 2]The information processor according to claim 1 with which said personal information includes health information measured in school.
[Claim 3]The information processor comprising according to claim 2:
A means by which said input means receives wave motion which shows health information emitted from measuring equipment.
A means to read health information in a received result.

[Claim 4]The information processor according to claim 1 with which said personal information includes result data in a school.
[Claim 5]The information processor comprising according to claim 4:
A means by which said input means receives wave motion which shows result data emitted from a computer for teachers.
A means to read result data in a received result.

[Claim 6]The information processor according to any one of claims 1 to 5 which has a means by which said displaying means displays aging of personal information in a graph.

[Translation done.]

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DETAILED DESCRIPTION

[Detailed Description of the Invention]
[0001]
[Field of the Invention]This invention relates to the information processor which each student uses it and manages a student's own personal information in school life, such as an elementary school.
[0002]
[Description of the Prior Art]Height, weight which are measured periodically [the student who goes to school] at their own information, for example, school grounds, When managing studies information, including health information, such as a diagnostic result obtained by the medical checkup of a gear tooth, an ear, etc., a test result, a test-of-physical-strength-and-fitness result, the number of times of an announcement in a lesson, etc., by an individual, those information is written down in a specific note, or it is recording on the predetermined paper distributed from a school in the graph or the table.
[0003]However, in such a method, it happening forgetting the writing of information, and being unable to leave perfect record with the passage of time, or losing the recorded note or paper also often occurs. For a student, this work is troublesome and is also difficult work for the child of especially a low grade. Development of the device which can perform collection and record of such information by easy operation is desired by such situation.
[0004]By the way, the electronic education system which introduces into the educational world the art of information communication in which remarkable development is accomplished as a new education system in recent years is considered. Such an education system has the possibility of the use at the time of telling an informative matter from a school to a student, exchanging information closely between a teacher and a student, or a teacher performing fine instruction according to each student, or exchanging information mutually between students.
[0005]This invention is made in view of this situation, and it aims at providing the information processor with which a student can manage the personal information on own easily.
[0006]Other purposes of this invention are to provide the information processor which can carry out input collection of the personal information automatically.
[0007]The purpose of further others of this invention accumulates personal information, and there is in providing the information processor which can carry out graphical representation of the aging of the personal information.
[0008]The input means which the information processor concerning claim 1 is an information processor for inputting and displaying information which each student of a school uses, and inputs each student's personal information, It has a storing means which stores the inputted personal information, and a displaying means which displays the personal information inputted or stored.
[0009]The information processor concerning claim 2 includes the health information by which said personal information is measured in school in claim 1.
[0010]The information processor concerning claim 3 has a means to receive the wave motion which shows the health information by which said input means is emitted from measuring equipment, and a means to read health information in a received result, in claim 2.

[0011]In claim 1, as for the information processor concerning claim 4, said personal information includes the result data in a school.

[0012]The information processor concerning claim 5 has a means to receive the wave motion which shows the result data by which said input means is emitted from the computer for teachers, and a means to read result data in a received result, in claim 4.

[0013]Setting [they to be / any of claims 1 thru/or 5] the information processor concerning claim 6, said displaying means has a means to display aging of personal information in a graph.

[0014]Drawing 15 is a mimetic diagram showing the composition of the information processor of this invention. In a figure, 3 is an information processor of this invention which each student of a school uses.

The information processor 3 has the input part 21 which inputs the personal information of the student who is a user, the storage 22 which stores the inputted personal information, and the indicator 23 which displays the personal information inputted or stored.

The input part 21 is provided with the alter operation part 24 which receives the alter operation from a student, the receive section 25 which receives the wave motion which shows personal information, and the reading section 26 which reads personal information in the received result in the receive section 25.

[0015]A student will input the personal information into the information processor 3 which self uses by the alter operation part 24 of the input part 21, if the personal information on own is got to know. The inputted personal information is sent and stored in the storage 22, and if there is the necessity for a real time display, it will be sent also to the indicator 23. The student itself performs alter operation in this case manually.

[0016]On the other hand, in the information processor of this invention, the input of personal information can be performed automatically as follows. In drawing 15, 4 is an information radiation means which emits a student's personal information with the wave motion.

Specifically, it consists of measuring equipment which measures and gives a student's health information (measurement results, such as height and weight), a computer for teachers which gives a student's school-records information, including test result etc., etc.

If the wave motion including personal information, such as health information and school-records information, is emitted from the information radiation means 4, the wave motion will be received in the receive section 25, and the personal information included in it according to the received result in the receive section 25 will be read by the reading section 26. The read personal information is sent and stored in the storage 22, and if there is the necessity for a real time display, it will be sent also to the indicator 23.

[0017]And the personal information (health information, school-records information, etc.) stored in the personal information and/or the storage 22 which were inputted is displayed on the indicator 23, and a student is shown it. In this case, personal information which is accompanied by aging is graph-ized, can be displayed, and can recognize that transition easily.

[0018]

[Embodiment of the Invention]Hereafter, the education system which used the information processor of this invention not only for management of personal information but for information exchange [between transfer of an informative matter, a teacher, and a student] between students is explained.

[0019]Drawing 1 shows an example of an operation state of such an education system.

The situation before the commencement of work of one class in an elementary school is expressed.

In drawing 1, 1 is the host computer connected to the antenna 2 which emits the wave motion of an electric wave, infrared rays, etc.

This host computer 1 is installed in the places (for example, a staff room, a studio, etc.) in the school where operation by a school official is convenient.

The antenna 2 connected to the wall of the entrance upper part of a classroom at the host computer 1 is formed, and the information about which a student should be told is disseminated to space via the antenna 2 by the electric wave from the antenna 2 from the host computer 1.

the information from the host computer 1 -- all the students, such as information of school events, such as a medical examination, an athletic meet, and a cultural exhibition, -- or it is the information which should be transmitted to all the students according to grade from a school. The ready-for-receiving ability range of the electric wave from the antenna 2 is in the classroom currently installed.

[0020]All the students who 3 is a terminal as an information processor of this invention which receives the wave motion from the antenna 2, and attend school, It carries the one terminal 3 at a time, and it goes to school, and he sits on a chair, the student who has gone to school entering in a classroom, carrying the terminal 3, and placing the terminal 3 on his own desk, and is waiting for the start of a lesson. The terminal 3 is laid on its own desk during session.

[0021]There is the desk 5 for teachers so that a student's desk may be faced ahead of a classroom, and on the desk 5 for teachers, the computer 41 for teachers which a class teacher operates is laid. What is necessary is just to use the personal computer which comprises the computer body 41a, the display 41b as a displaying means, and the keyboard 41c and the mouse 41d as an input means as the computer 41 for teachers. By the channel 6, the computer 41 for teachers is connected with the host computer 1 so that transmission and reception are possible. Information can be transmitted and received now between the host computer 1 and the computer 41 for teachers via the channel 6.

Each teacher may also be made to carry the same terminal 3 as a student, and information is transmitted from the host computer 1 via the antenna 2 in this case.

[0022]The movable media board 42 is placed in the wall case ahead of a classroom. The media board 42 makes a communication function add to the media board of general composition, and rectangular shape writes, and Itabe 42a, It has the reading part 42b which reads the information which wrote, scanned Itabe 42a horizontally, wrote him, and was written to Itabe 42a, the transmission section (transmission antenna) 42c which transmits the read information, and the data control operation part (not shown) which changes the read information into the data for communication.

[0023]The terminal 3 has a power supply by which ON OFF is not carried out with the electric power switch in which external operation is possible.

This power supply is always in an ON state, and it is regularly set as the receive state, and the terminal 3 will receive it automatically, if a certain wave motion is emitted from the antenna 2 when located in the ready-for-receiving ability range of the wave motion from the antenna 2 (inside grade of a site of a school).

Therefore, in the time zone when the student is going to school to school, it will be automatically received by the terminal 3, and the information which should be told to the student from a school will be transmitted to each student. Such a host computer 1 and the information transmission mode between the terminals 3 are called broadcasting mode.

[0024]Between the computer 41 for teachers and the media board 42, and the terminal 3, and between the terminal 3 of 1, and other terminals 3, transmission and reception of the information by electric waves, such as infrared rays or specific small power, are possible, and it has come. For example, the reply of the set problem is transmitted to the computer 41 for teachers from each terminal 3 which information etc. of the problem which the class teacher set, and a class unit are transmitted to each terminal 3 which each student has from the computer 41 for teachers, and each student operates. The figure and character which were written to the media board 42 are transmitted to each terminal 3 of each student from the media board 42. Transmission and reception of information are possible via terminal 3 comrades which each carries among students. The information transmission mode between two or more terminals 3 is called communication mode between such the computer 41 for teachers and the media board 42, and the terminal 3.

[0025]Two kinds of power supplies exist in the terminal 3 which each student has, one of them has always become one corresponding to broadcasting mode, and the change of turning on and off by operation of the change over switch mentioned later is possible for other one. Therefore, the terminal 3 is always an energization condition according to the former power supply, and the receive state in broadcasting mode is maintained. Therefore, the electric wave emitted from the antenna 2 is received by the terminal 3 of all the students who are in a school, and the information is incorporated in the terminal 3.

[0026]The terminal 3 which a student has is usually set as broadcasting mode, and receives the wave motion from the antenna 2.
It is switched to communication mode from broadcasting mode by the means for switching prepared for the case where the information on the computer 41 for teachers and the media board 42, or other terminals 3 needs to be transmitted and received at the terminal 3.
The terminal 3 is equipped with the timer, and the execution time in broadcasting mode or communication mode is controlled by this timer, for example, the transmitting and receiving processing of the information on the outside of enrollment-in-school time is forbidden. However, it is possible for each student to retrieve the information, including information from a school, homework, etc., accumulated in the own terminal 3 in his home, or to display. [outside enrollment-in-school time]

[0027]The calling origin information which specifies the dispatch origin is included in the transmit information emitted from the transmit information emitted from the host computer 1 and the computer 41 for teachers, the media board 42, and the terminal 3.
The terminal 3 identifies the dispatch origin according to the calling origin information included in the received information, and switches broadcasting mode and communication mode.

[0028]The destination information which shows the transmission destination is given to the transmit information emitted from the transmit information emitted from the host computer 1 and the computer 41 for teachers, the media board 42, and the terminal 3.
The terminal 3 or the computer 41 for teachers of a receiver acquires only the information addressed to itself based on the destination information given to the received information.
Therefore, only the information addressed to itself is efficiently collectable, and since the information on addressing to a student of others other than itself is not collected, the secret of information can be maintained.

[0029]The filter information relevant to the information which should be accumulated as for which transmitting [information] origin shows receiving contents etc. to the terminal 3 is set up, the filter information is compared with the newly received information, it judges whether the new information is accumulated according to a comparison result, and collection processing of information is performed. The filter information relevant to the information which should be retrieved as for which transmitting [information] origin shows receiving contents etc. to the terminal 3 is set up, the information accumulated is read, the read information is compared with its filter information, and only required information is retrieved according to a comparison result. The terminal 3 can perform collection processing and retrieval processing of information efficiently as mentioned above.

[0030]Drawing 2 is a perspective view of the terminal 3 which each student uses. Flat rectangular parallelepiped shape is made, it has the color monitor 3a of the liquid crystal of type corresponding to input and output in the center, and the terminal 3 can display the information received to the color monitor 3a, and can be inputted into the color monitor 3a with the attached input pen 3b. The keyhole 3c is formed in the corner of the terminal 3, it has made that this terminal 3 should not start communication mode without a student inserting the key 3d peculiar to himself in this keyhole 3c, and individual privacy is protected.

[0031]The change over switch 3e which performs a change with broadcasting mode and communication mode, LED3f turned on when the change over switch 3e is one, the transmit operation button 3g for directing the start of the transmit operation of information in the case of communication mode, and the transmission button 3h for performing transmission of the inputted information are formed. The registration number part 3i classified by individual which registers the number of the specific student who uses the terminal 3 is formed, and information can be transmitted now only to a specific student by specifying a specific student's number.

[0032]Drawing 3 is a block diagram showing the composition of the terminal 3. The receive section 30 which receives the information to which the terminal 3 was transmitted in response to the electric wave from the electric wave and the computer 41 for teachers, the media board 42, or other terminals 3 from the antenna 2, Based on the flag ("1" or "0") contained in the received information, identify broadcasting mode or communication mode, and. The receipt information identification part 31 which identifies whether the destination information included in the received information is read, and it is the no which is the information on the own terminal 3, The information gathering part 32 which collects and accumulates the information addressed to self, and the information retrieval section 33 which retrieves the accumulated information, The outputting part 34 which outputs the information retrieved from the information or the information retrieval section 33 of new addressing to self from the receipt information identification part 31 to the color monitor 3a, The input part 35 with the display function which inputs the information which should be transmitted to the computer 41 for teachers, or other terminals 3, It has the data control operation part 36 which changes into radio data the information inputted into the input part 35, the transmission section 37 which transmits the electric wave according to the radio data, and the control section 38 which controls these each part.

[0033]Next, the structure of the commo data transmitted from the structure and the computer 41 for teachers, the media board 42, or the terminal 3 of the commo data transmitted from the host computer 1 is explained.

[0034]The format figure in which drawing 4 shows the constructional example of the commo data transmitted from the host computer 1, and drawing 5 are the figures showing the example. As shown in drawing 4 and drawing 5, the commo data from the host computer 1, It is arranged in order of the 1ID-informationa (specifically "school") which shows a sending agency, the 2ID-informationb (for example, "informative matter to a student") showing the classification of information, the 3ID-informationc (specifically "sixth grader") which shows an address, and the concrete contents d (for example, "the explanation meeting of a school trip is held from 4:00"). The flag information which shows that it is in broadcasting mode is included in this 1st ID information.

[0035]The format figure showing the constructional example of the commo data in which drawing 6 is transmitted from the computer 41 for teachers, the media board 42, or the terminal 3, and drawing 7 are the figures showing the example of the commo data from the computer 41 for teachers. The 1ID-informationp this commo data indicates a sending agency to be as shown in drawing 6 and drawing 7 (specifically "teacher"), It is arranged in order of the 2ID-informationq (for example, "homework") showing the contents of information, the 3ID-informationr (specifically "Mr. A, Mr. B") which shows an address, and the concrete contents s (for example, "a test print is rewrong"). The flag information which shows that it is in communication mode is included in this 1st ID information.

[0036]About the 3rd ID information that shows the 1st ID information that shows the dispatch origin mentioned above, and an address, since the thing used as the object is limited, if a sending agency and an address are specified using a code, it is convenient.

[0037]Thus, since the 1st ID information that a sending agency understands for each is included in the commo data from the commo data and the computer 41 for teachers, the media board 42, or the terminal 3 from the host computer 1, in the terminal 3 of a receiver, a transmitting agency can be specified for every information. From the commo data and the computer 41 for teachers, the media board 42, or the terminal 3 from the host computer 1 to commo data. Since the 3rd ID information that an address understands is included, in the terminal 3 of a receiver, it can be identified whether it is the information addressed to itself, and only the information addressed to itself can be collected.

[0038]Next, processing of such an education system is explained. In the mode which the terminal 3 which a student has performs. The broadcasting mode in which the electric wave from the antenna 2 with which the information from the host computer 1 was incorporated is received, and the communication mode which transmits and receives the information by an electric wave between the computer 41 for teachers, the media board 42, or other terminals 3 exist. And both these modes change by operation of the change over switch 3e.

[0039]Drawing 8 is a flow chart which shows processing of the switching operation in both this mode. It judges whether the change over switch 3e is one (S1), the change over switch 3e serves as broadcasting mode, in being off (S1:NO) (S2), and it becomes communication mode when the change over switch 3e is one (S1:YES) (S3). As a general example, during session, it is set as communication mode by considering the change over switch 3e as one so that transmission and reception of information with a teacher and a student may be made in each class unit, Except can consider during session an example of a change which makes the change over switch 3e off, and is set as broadcasting mode so that information common to all the students can be transmitted. Since LED3f lights up while the change over switch 3e is one, a student can recognize easily that it is in communication mode.

[0040]Drawing 9 is a flow chart which shows the procedure in broadcasting mode. It judges whether operation of the mode change was made (S11), and when the operation is made, it changes to (S11:YES) and communication mode (S3). If it judges whether (S11:NO) and commo data were received in the receive section 30 (S12) and commo data is not received when mode switching operation is not made, a return is carried out as it is. On the other hand, when commo data is received, the flag of the 1st ID information in (S12:YES) and its commo data judges whether there is any flag (for example, "1") in broadcasting mode by the receipt information identification part 31 (S13), Otherwise (S13:NO) it changes to communication mode (S3). When it is a flag in broadcasting mode, it is judged by the receipt information identification part 31 whether he is contained in the address of (S13:YES) and its commo data (S14). And when he is contained, after displaying (S14:YES) and its commo data on the color monitor 3a via the outputting part 34 (S15), it accumulates in the information gathering part 32 (S16). the case where he is not contained in the address on the other hand -- (S14:NO) -- a return is carried out as it is.

[0041]Here, the example of application in the broadcasting mode in a school is explained. The electric wave which incorporated the information from the host computer 1 using the time zones after the rest time also containing a lunch break and closing time etc. is sent in a school from the antenna 2 before commencement-of-work time except school hours that is,. Each student's terminal 3 receives this electric wave, identifies the flag in broadcasting mode, displays the information incorporated in the electric wave on the color monitor 3a, and tells a student about it. After displaying only predetermined time, the information is accumulated to the information gathering part 32. Therefore, the informative matter from a school can be certainly transmitted to a student.

[0042]The display example in the terminal 3 in such broadcasting mode is explained. The contents of the newest receipt information are displayed on the color monitor 3a of the terminal 3, and after being accumulated about the information received before, only the ID information is displayed as a list. By specifying the item of the list, the student can display the information on the accumulated request on the color monitor 3a.

[0043]Thus, the broadcasting mode of this invention achieves the same duty as the conventional school public address system. Although some students missed contents of broadcast and an informative matter did not get across to all the students certainly in a school public address system in many cases, In this invention, since it is accumulated in an inside as data even if it overlooks the informative matter displayed at the time of transmission, since an informative matter gets across to all the students' terminal 3 certainly regardless of a student's attentiveness, the contents of the informative matter can be grasped by reading the accumulation data. Since the contents of the informative matter can be reconfirmed, the contents are correctly transmitted by read-out of accumulation data.

[0044]If it is in such broadcasting mode, it is also possible to specify an address as a "fifth grader", a "science club", etc., and to transmit an informative matter only to a specific student, and it is also possible by specifying an address as "unspecified" to transmit an informative matter to all the students.

[0045]In addition to the above examples, at public places, such as a station, a museum, an art gallery, and the event hall. When the same host computer and antenna as a school are set up and a student goes into such a public place, the example of application in broadcasting mode with which various kinds of information on the host computer is received at the terminal 3 via an antenna is also possible.

[0046]Drawing 10 is a flow chart which shows the procedure in communication mode. It judges whether it is the no by which operation of the mode change was made (S21), and when the operation is made, it changes to (S21:YES) and broadcasting mode (S2). When mode switching operation is not made, it is judged whether (S21:NO) and commo data were received in the receive section 30 (S22). When commo data is received, the flag of the 1st ID information in (S22:YES) and its commo data judges whether there is any flag (for example, "0") in communication mode by the receipt information identification part 31 (S23), Otherwise (S23:NO) it changes to broadcasting mode (S2). When it is a flag in communication mode, it is judged by the receipt information identification part 31 whether he is contained in the address of (S23:YES) and its commo data (S24). And when he is contained, after displaying (S24:YES) and its commo data on the color monitor 3a via the outputting part 34 (S25), it accumulates to the information gathering part 32 (S26). the case where he is not contained in the address on the other hand -- (S24:NO) -- a return is carried out as it is. In S22, when not receiving commo data (S23:NO), it is got [whether transmit operation was performed and] blocked and it is judged whether it is the no on which the transmit operation button 3g was pushed (S27). When the transmit operation button 3g is not pushed (S27:NO), a return is carried out as it is, when pushed (S27:YES), transmitting processing (S28) of data is performed and processing is ended.

[0047]Drawing 11 is a flow chart which shows the procedure of the data transmission processing in the terminal 3. After pushing the transmit operation button 3g, concrete information content which should transmit to the color monitor 3a using the input pen 3b is inputted (S31), and the 3rd ID information that shows the 2nd ID information that shows the classification of the contents, and an address is inputted (S32). The 1st ID information that shows a sending agency is automatically added before transmission. Such input data is sent to the data control operation part 36 via the input part 35, and is changed into radio data. And the transmission button 3h is pushed and the radio data which was carried out in this way and created is transmitted from the transmission section 37 (S33).

[0048]Transmitting processing of the commo data from the media board 42 to the computer 41 for teachers and the terminal 3 is also fundamentally [as what is shown in drawing 11] the same.

[0049]Next, the example of application in the communication mode in a school is explained. During session, the terminal 3 of all the students in a class is set as communication mode.

[0050]First, the example of the information transmission of a teacher and a student, i.e., the information transmission of the computer 41 for teachers and the terminal 3, is explained. For example, the case where a teacher presents the problem of arithmetic common to the student in a class, and each student shows a teacher the reply is considered. In this case, using the keyboard 41c of the computer 41 for teachers, and the input means of the mouse 41d, a teacher creates commo data and transmits. The 1st ID information of the commo data at this time, the 2nd ID information, the 3rd ID information, and concrete contents are set to a "teacher", a "problem", ["unspecified"], and "32/(2+6) x2", respectively. And this commo data is displayed on the color monitor 3a of each student's terminal 3. Each student solves this problem, calculates an answer, after he pushes the transmit operation button 3g, creates commo data and transmits. The 1st ID information of the commo data at this time, the 2nd ID information, the 3rd ID information, and concrete contents are set to "A (student name)", "a reply", a "teacher", and "8", respectively. Here, the display 41b of the computer 41 for teachers is a split screen, and the commo data from each student is displayed on each split screen. Thus, the teacher can advance a lesson, communication with a teacher and all students of a class being possible, and grasping each student's degree of comprehension during session.

[0051]In such a problem and the example which transmits and receives a reply, since the address from the teacher side can be set up for every arbitrary students, Since the problem from which difficulty differs can be set individually according to a group so that a problem difficult for a student with high capability may be said to the student in whom capability is inferior in an easy problem, fine instruction according to each student's capability can be performed.

[0052]Next, the information transmission between the media board 42 and a student's terminal 3 is explained. A teacher scans the portion which the media board 42 wrote, and arranged, wrote and wrote the main point of today's lesson to Itabe 42a by the reading part 42b, and reads the contents. The commo data in which the read contents are shown is created, and it is transmitted from the transmission section 42c. this time -- the 1st ID information, the 2nd ID information, the 3rd ID information, and concrete contents -- respectively -- For example, an order of a ″blackboard″, ″today's main point″, [″unspecified″], and ″calculation .... it is ″. After this commo data is displayed on the color monitor 3a of each student's terminal 3, it is accumulated in the information gathering part 32 in the terminal 3. Thus, since the contents in which the teacher did writing on the board during session are stored in the terminal 3, the work of copying for a note becomes unnecessary and a student can be concentrated on listening comprehension of a teacher explanation.

[0053]Next, the example of the information transmission of between [students], i.e., the information transmission between a certain student's terminal 3 and other students' terminal 3, is explained. For example, the case where the student A connects the time of practice of the play of a cultural exhibition to other performers is considered. In this case, the student A inputs the contents of an address and the message into the color monitor 3a using the input pen 3b of his own terminal 3, after pushing the transmit operation button 3g. And a push on the transmission button 3h will transmit commo data. At this time, the 1st ID information, the 2nd ID information, the 3rd ID information, and concrete contents are ″A″, an ″informative matter″, ″Mr. B, Mr. C, Mr. D″, and ″practicing a play from 3:00 of today″, respectively. Although received by the terminal 3 of all the students of a class, since the address is limited, neither display nor accumulation is carried out to the terminal 3 of students other than Mr. [Mr. B, Mr. C, and / D], but this commo data is displayed and accumulated only in the terminal 3 of Mr. B, Mr. C, and Mr. D. Thus, information transmission between students can be performed in the mode which moreover specified the partner.

[0054]In addition to the above examples, an address by specifying it as ″unspecified″ from the computer 41 for teachers to the terminals 3 of all classes. Or since it can transmit to other terminals 3 of all the from the one terminal 3, it is also possible by using this function to apply communication mode as a class newsletter, a communication note, etc.

[0055]Although the terminal 3 was set as communication mode during session and presupposed during session that except is set as broadcasting mode in the example mentioned above, of course, both these modes can be arbitrarily switched by the switching operation of the change over switch 3e.

[0056]By the way, in a schoolchild's upper classes and low grade, since the knowledge and judgment have a big difference, if the interface of the terminal 3 is made common to all the grades, it is possible [it] that user-friendliness worsens. Then, if it is in the terminal 3 of this invention, he updates the interface according to a student's growth, and is trying to change a display style according to a grade. For example, when promoted in a new grade, the interface program of the terminal 3 is changed by inserting the system card which wrote in the program for conversion to the indicative data suitable for the grade.

[0057]It is possible to change the size of the character displayed which changes the expressional method which limits the kind of Chinese character to be used according to a grade as an element which changes a display style according to a grade (consent different word) and which gives reading to a Chinese character at a low grade etc. For example, when connecting the contents of postponing an excursion until the time of rainy weather to a student, the student of upper classes can fully be contacted with expression of ″postponing an excursion until next week when tomorrow is rainy weather″, but now, the student of a low grade cannot understand the contents well. So, it is displayed on the terminal 3 which the student of a low grade uses as ″the leg (****) which will not be obtained at next week is lengthened″, when rain (candy) rains tomorrow. In the terminal 3 which the student of a low grade uses, the size of the character displayed is enlarged compared with the terminal 3 which the student of upper classes uses, and the student of a low grade is made legible.

[0058]With thus, expression which suited the skill level of study in each grade when the same contents as all the students were connected in the terminal 3 of this example. It is user-friendly for all the students, without being able to perform the connection, and the student of upper classes not sensing redundancy, and the student of a low grade being unable to understand the contents.

[0059]In the example mentioned above, as the technique of changing a display style according to a grade, when it progressed to a new grade, the system card with which the program suitable for the grade was written in was inserted, but it is also possible to use the following techniques. All the programs used in six years are beforehand stored in the terminal 3 per grade, **** processing is performed to the program of each grade unit, and when the student who uses it progresses to a new grade, **** of the program according to the grade may be made to be removed one by one. When the student who uses it is promoted in a new grade, it may be made to transmit the data of the new program suitable for the grade to each terminal 3 from the host computer 1. Although we decided to update the display style of information according to a grade in the example mentioned above, it is also possible to change the display style in a student individual.

[0060]If use in the school which is a place of a group life, and a 0 to 2 years old's social underdevelopment are taken into consideration, it faces using the education system mentioned above, and an ethical and social use indicator is required. for example, the transmitting and receiving processing forbid the transmitting and receiving processing using the terminal 3 of an after school, and according to the terminal 3 -- the inside of a school -- restricting (however, when a teacher leads, use out of a school is also possible) -- transmission and reception between students need to forbid or to set up a thing use indicator in school hours. In such a case, since a student's enrollment-in-school time and school hours are decided, it is possible as an example to set up a timer double with it and to restrict the using time zone of the terminal 3 with the timer.

[0061]Next, the characterizing portion of this invention which uses such a terminal 3 that each student uses as a device which manages each student's personal information is explained.

[0062]Studies information, including health information, such as a diagnostic result obtained by the medical checkup of height, weight, a gear tooth, an ear, etc. which are periodically measured as a typical thing of the information about a student individual in school life, a test result, a test-of-physical-strength-and-fitness result, the number of times of an announcement in a lesson, etc., etc. can be considered. As management of such personal information was mentioned above, the input process of the information especially acquired periodically with complicatedness was troublesome, but it is possible by using the terminal 3 of this invention as follows to manage personal information including input collection processing of personal information easily.

[0063]Drawing 12 is a mimetic diagram showing the condition of use of such a terminal 3.
40 in a figure is the measuring equipment which is put on the nurse's office and can measure a student's height and weight simultaneously.
The measuring equipment 40 is provided with the dispatch part 40a which sends the electric wave showing a measurement result. 3 is a terminal (information processor) of this invention which each student uses, and has the same internal configuration as drawing 15 mentioned above.

[0064]Next, operation is explained. Carrying the terminal 3, a student goes into the nurse's office. And a student rides on the measuring equipment 40, after placing the terminal 3 near the measuring equipment 40. The measuring equipment 40 measures a student's height and weight, and sends the measurement result from the dispatch part 40a through radio. The sent electric wave is received in the receive section 25, and the measurement result of height and weight is read by the reading section 26 by the received wave in the receive section 25. The read measurement result is sent and stored in the storage 22, and it is sent and displayed also on the indicator 23. The above processings are automatically performed, when the terminal 3 is an ON state. Therefore, there is no troublesomeness of alter operation and the personal information of height and weight can be managed very simply.

[0065]Such a measurement result stored in the storage 22 can be read at the arbitrary times, and can be displayed on the indicator 23 (color monitor 3a shown in drawing 2). Under the present circumstances, as shown in drawing 13, aging of weight (or height) can be displayed in a line graph. Therefore, transition of weight (or height) can be recognized easily visually.

[0066]If it has the mechanism which can send health information through radio, medical checkup results, such as an inspection result of eyesight, a gear tooth, and an ear, can completely be similarly inputted into the terminal 3 which they use for every student automatically.

[0067]When the input collection of the origination information from the computer 41 for teachers mentioned above is made to be carried out at the terminal 3, the personal information on a large number kinds other than health information, such as results of a test, the number of times of an announcement in session, a check of homework, and record of attendance and absence, can be inputted automatically.

[0068]Thus, since the health information from the measuring equipment 40 and the studies information from the computer 41 for teachers are transmitted through radio towards the terminal 3 of student use, the terminal 3 receives such personal information in this invention and it was made to save, In order that personal information also including the input process can be managed very simply and a student's burden may reduce, the terminal 3 of this invention has the high utility value as a management tool of personal information.

[0069]Of course, it is also possible to input the acquired personal information into the terminal 3 manually in the terminal 3 of this invention using the alter operation part 24 (input pen 3b shown in drawing 2) in addition to an automatic input which was mentioned above.

[0070]Although various information is collected in the education system mentioned above by the terminal 3 which a student carries, there is a limit in the capacity of the memory which accumulates these various information so that the size of the terminal 3 may not become not much large. Therefore, the function to collect the received information efficiently is required. Although each student outputs the accumulated information if needed and checks the information, the function to retrieve required information promptly is required. Hereafter, the collection processing and retrieval processing of information in the terminal 3 are explained.

[0071]Drawing 14 is a block diagram showing the internal configuration of the information gathering part 32 of the terminal 3 related to collection and retrieval processing of information, and the information retrieval section 33 (refer to drawing 3). In drawing 14, the information gathering part 32 which controls collection of information, The comparing element 32b which compares the accumulating part 32a which accumulates the received information with the received information and the information accumulated in the accumulating part 34, It has the storage controlling part 32c which outputs the accumulation propriety information which the information which should be accumulated in the accumulating part 32a according to the comparison result of the comparing element 32b, and the information which does not need to be accumulated are judged, and shows the decision result to the accumulating part 32a. The information retrieval section 33 which controls search of information has the search outputting part 33a which retrieves and outputs desired information from the information accumulated in the accumulating part 34, and the search information storage part 33b which accumulates the search information at the time of the search outputting part 33a retrieving information (the 1st ID information, the 2nd ID information). When the information to which the 1st ID information and/or the 2nd ID information differ from old information is received, the search information storage part 33b HE input of the 1st ID information and/or the 2nd ID information of the information is carried out from the storage controlling part 32c.

[0072]Next, collection of information and the processing operation of search are explained. The electric wave in which information was incorporated is received in the receive section 30, the received wave is sent to the receipt information identification part 31, and the address of the information is identified. When it is the information addressed to self, the receipt information is inputted into the accumulating part 32a, the comparing element 32b, and the storage controlling part 32c. The comparing element 32b compares the information inputted from the receipt information identification part 31 with the information accumulated in the accumulating part 32a. The comparing element 32b compares about the 1st ID information, the 2nd ID information, and the concrete contents about the information from the receipt information identification part 31, and the information in the accumulating part 32a concretely. And the comparison result is outputted to the storage controlling part 32c. The storage controlling part 32c judges which information based on the comparison result, which information is accumulated and is not accumulated.

[0073]Concretely, when the information in which the information, the 1st ID information, the 2nd ID information, and all the concrete contents newly inputted correspond is accumulated in the accumulating part 32a, the storage controlling part 32c, Although the information, the 1st ID information, and the 2nd ID information which judged that the newly inputted information was not accumulated and were newly inputted are in agreement, when the information that concrete contents differ is accumulated in the accumulating part 32a, Delete the information accumulated in the accumulating part 32a, and it is judged that the newly inputted information is accumulated, both [which were newly inputted] information the 1st ID information and the 2nd ID information -- although -- when information which is in agreement is not accumulated in the accumulating part 32a, it is judged that the newly inputted information is accumulated. And the accumulation propriety information which shows such a decision result is sent to the accumulating part 32a from the storage controlling part 32c. The accumulating part 32a performs accumulation processing of information according to this accumulation propriety information.

[0074]Thus, when the commo data of the same contents is received, the commo data is not accumulated, Accumulation data is updated by contents new when the commo data in which the contents were changed is received, Since filtering processing to the received commo data in which the commo data is accumulated is performed when the new commo data in which the 1st ID information differs from the 2nd ID information is received, Accumulating certainly, the required information can prevent accumulation of useless information and can aim at effective use of storage capacitance. For example, in such a case, although the information on an identical content is considered [being sent repeatedly in many cases and] in broadcasting mode, since the information on the same contents is not accumulated, the useless information on an identical content is not accumulated repeatedly.

[0075]When the 1st ID information, the information by which it is already accumulated in the accumulating part 32a any of the 2nd ID information they are, and information which differs from each other are newly inputted, from the storage controlling part 32c, a search information storage part 33b HE input is carried out, and the 1st ID information and/or 2nd ID information are accumulated. When a student retrieves required information, the 1st ID information and/or the 2nd ID information are specified as a keyword. Then, the search outputting part 33a retrieves and outputs the information corresponding to the keyword from all the information accumulated in the accumulating part 32a with reference to the search information (the 1st ID information, the 2nd ID information) accumulated in the search information storage part 33b.

[0076]Thus, since filtering processing to all the information which accumulates the search information relevant to the information which should be retrieved in the search information storage part 33b, and is accumulated in the accumulating part 34 according to the search information is performed, it is possible to retrieve the information which a student wants exactly and promptly, and to show a student.

[0077]Although the antenna 2 connected to the host computer 1 was formed in the entrance of the classroom in the embodiment mentioned above, it cannot be overemphasized that it may be set as other places, such as an entrance hall near the school gate and the roof. Although the information media in an electric wave and communication mode also made the information media in broadcasting mode the electric wave, it may be other combination that this is an example and uses infrared rays etc.

[0078]

[Effect of the Invention]As explained in full detail above, in the information processor of this invention, each student can manage very easily personal information, such as own health information and studies information, also including the input collection processing. Since the personal information can be automatically inputted when personal information is sent with the wave motion, an input failure is lost and personal information can be collected certainly. Since the graphical representation of the aging of personal information can be carried out, the change can be recognized visually.

[Translation done.]

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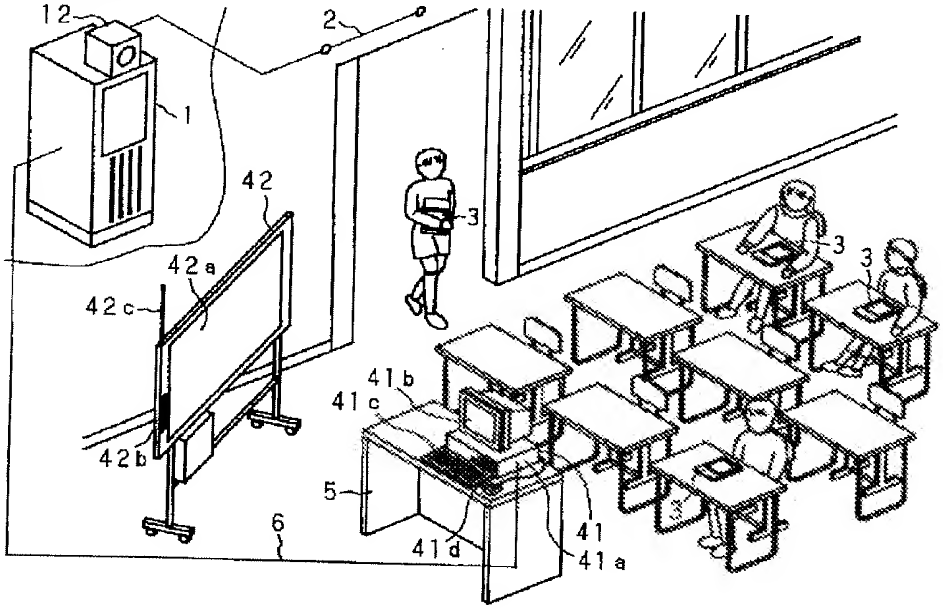
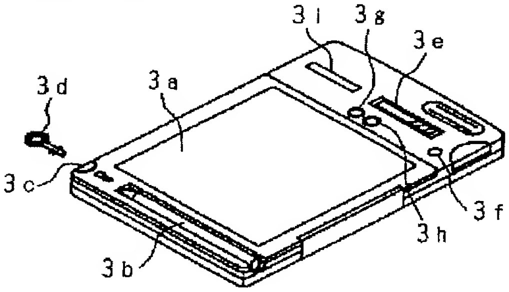
2.**** shows the word which can not be translated.
3.In the drawings, any words are not translated.

DRAWINGS

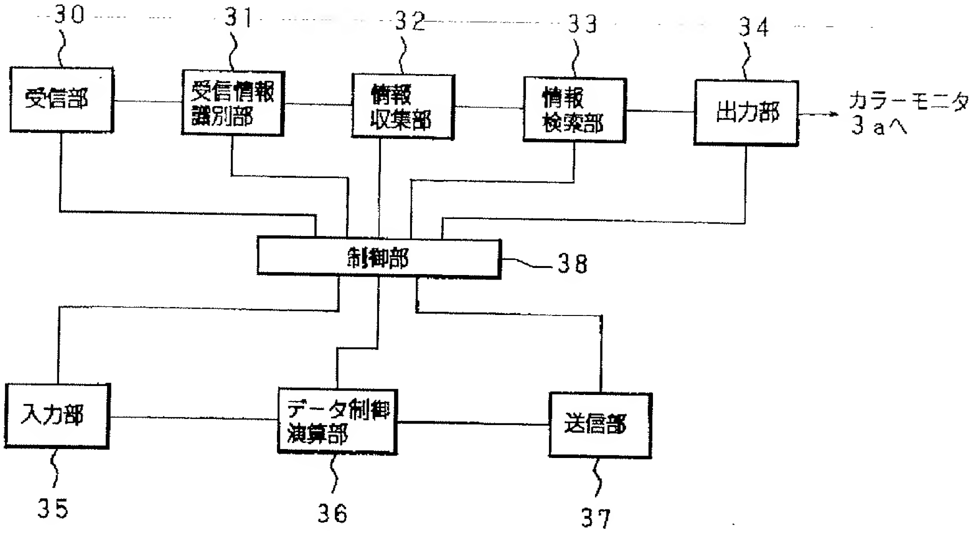
[Drawing 1]


12
2
1
42
3
3
3
42a
42c
41b
41c
42b
5
6
41d
41
41a

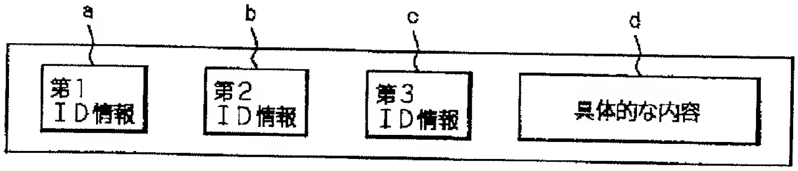
[Drawing 2]


3i
3g
3e
3d
3a
3c
3f
3h
3b

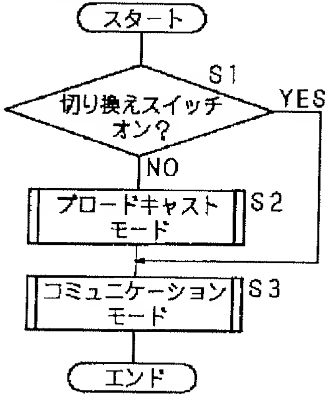
[Drawing 3]


30
31
32
33
34
受信部
受信情報識別部
情報収集部
情報検索部
出力部
カラーモニタ3aへ
制御部
38
入力部
データ制御演算部
送信部
35
36
37

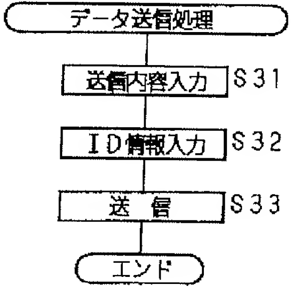
[Drawing 4]


a
b
c
d
第1 ID情報
第2 ID情報
第3 ID情報
具体的な内容

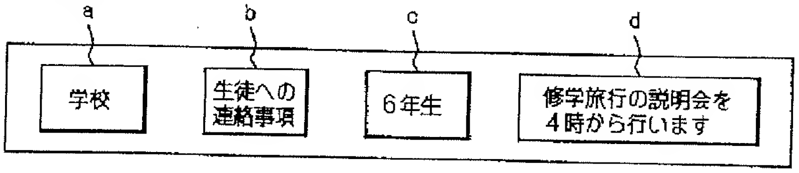
[Drawing 8]


スタート
S1
切り換えスイッチオン？
YES
NO
ブロードキャストモード
S2
コミュニケーションモード
S3
エンド

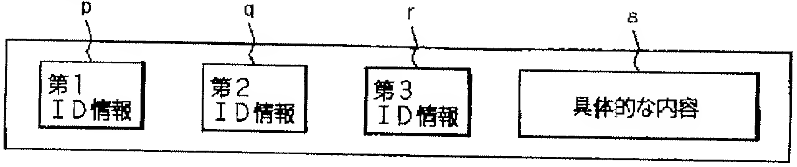
[Drawing 11]


データ送信処理
送信内容入力
S31
ID情報入力
S32
送信
S33
エンド

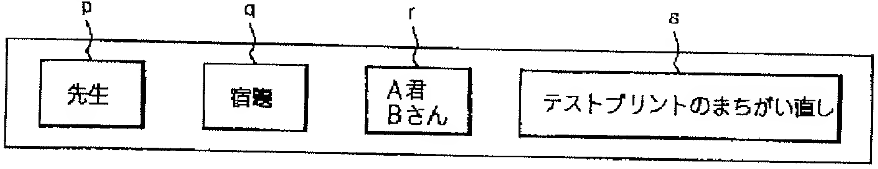
[Drawing 5]


a
b
c
d
学校
生徒への連絡事項
6年生
修学旅行の説明会を4時から行います

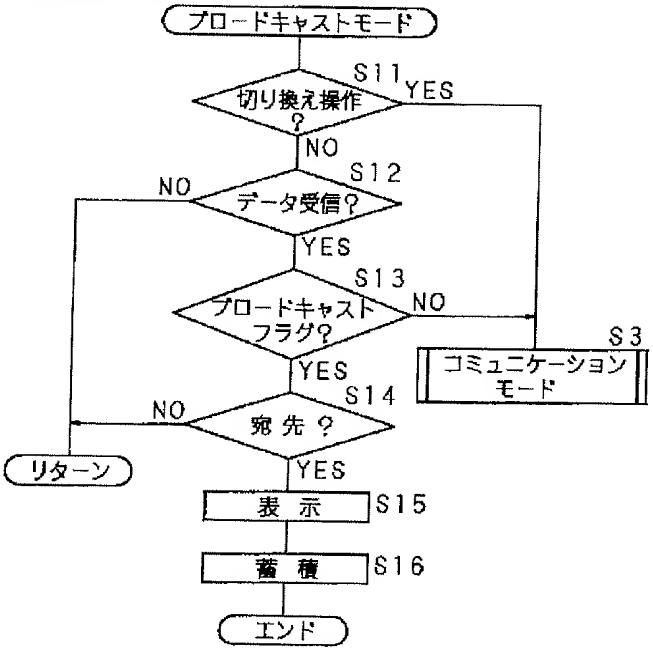
[Drawing 6]


p
q
r
s
第1 ＩＤ情報
第2 ＩＤ情報
第3 ＩＤ情報
具体的な内容

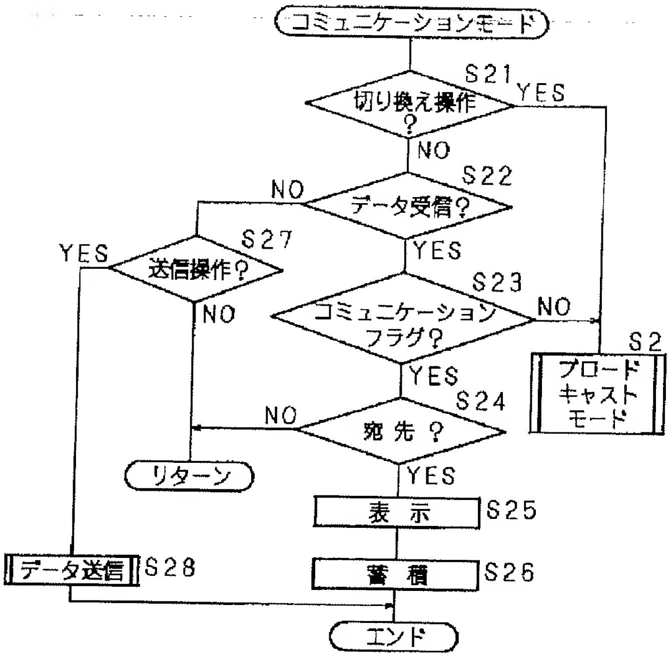
[Drawing 7]


p
q
r
s
先生
宿題
A君 Bさん
テストプリントのまちがい直し

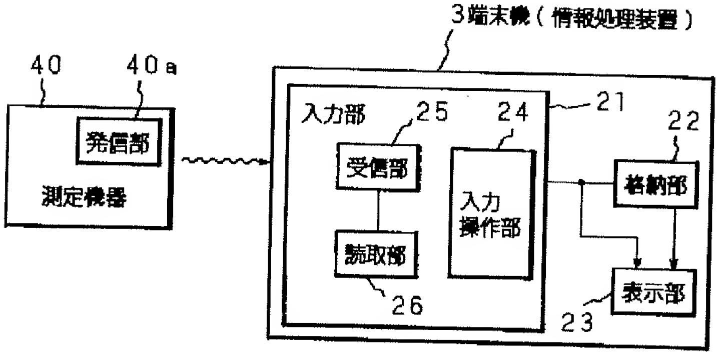
[Drawing 9]


ブロードキャストモード
S11
切り換え操作？
YES
NO
S12
データ受信？
NO
YES
S13
ブロードキャストフラグ？
NO
YES
S3
コミュニケーションモード
S14
宛 先 ？
NO
YES
リターン
表 示
S15
蓄 積
S16
エンド

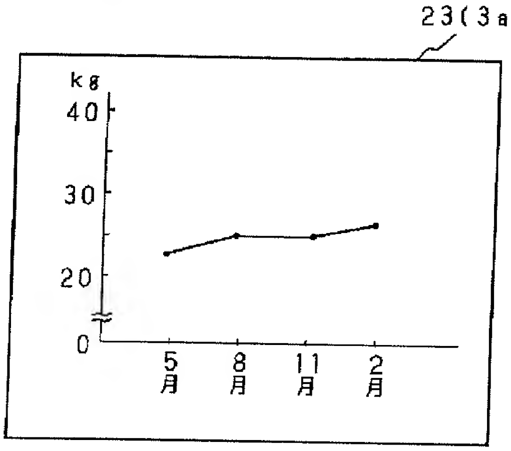
[Drawing 10]


コミュニケーションモード
S21
切り換え操作？
YES
NO
S22
データ受信？
NO
YES
S27
送信操作？
YES
NO
S23
コミュニケーションフラグ？
NO
S2
ブロードキャストモード
YES
S24
宛先？
NO
リターン
YES
表示
S25
蓄積
S26
データ送信
S28
エンド

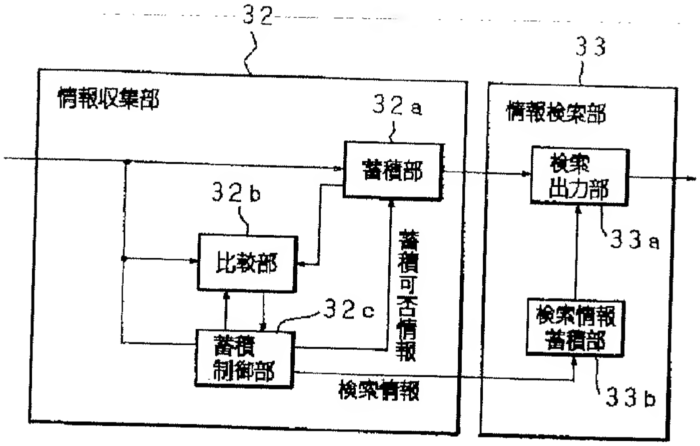
[Drawing 12]


3端末機（情報処理装置）
40
40a
発信部
測定機器
入力部
25
24
21
22
受信部
入力操作部
格納部
読取部
26
表示部
23

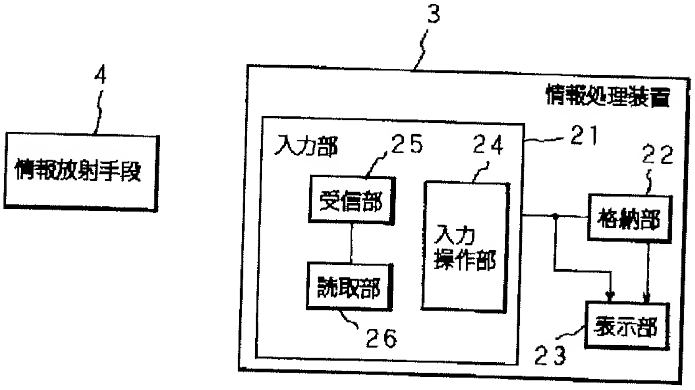
[Drawing 13]



[Drawing 14]


32
33
情報収集部
32a
蓄積部
情報検索部
検索出力部
32b
比較部
33a
蓄積可否情報
32c
検索情報蓄積部
蓄積制御部
検索情報
33b

[Drawing 15]


3
4
情報処理装置
情報放射手段
入力部
25
24
21
22
受信部
入力操作部
格納部
読取部
表示部
26
23

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DESCRIPTION OF DRAWINGS

[Brief Description of the Drawings]
[Drawing 1]The figure showing an example using the information processor (terminal) of this invention of an operation state of an education system
[Drawing 2]The perspective view of the information processor (terminal) which each student uses
[Drawing 3]The lineblock diagram of the information processor (terminal) which each student uses
[Drawing 4]The format figure showing the constructional example of the commo data transmitted from a host computer
[Drawing 5]The format figure showing the example of the commo data transmitted from a host computer
[Drawing 6]The format figure showing the constructional example of the commo data transmitted from the computer for teachers, a media board, or an information processor (terminal)
[Drawing 7]The format figure showing the example of the commo data transmitted from the computer for teachers
[Drawing 8]The flow chart which shows processing of the switching operation in broadcasting mode and communication mode
[Drawing 9]The flow chart which shows the procedure in broadcasting mode
[Drawing 10]The flow chart which shows the procedure in communication mode
[Drawing 11]The flow chart which shows the procedure of the data transmission processing in an information processor (terminal)
[Drawing 12]The figure showing an example of an operation state of the information processor (terminal) used for management of personal information
[Drawing 13]The figure showing the display example of the personal information in an information processor (terminal)
[Drawing 14]The block diagram showing the basic constitution of collection and a retrieval processing system of the information in an information processor (terminal)
[Drawing 15]The mimetic diagram showing the composition of the information processor (terminal) of this invention
[Description of Notations]
1 Host computer
2 Antenna
3 Terminal (information processor)
4 Information radiation means
21 Input part
22 Storage
23 Indicator
24 Alter operation part
25 Receive section
26 Reading section
40 Measuring equipment

40a dispatch part
41 The computer for teachers

[Translation done.]